

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave.St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-023705**Date Inspected:** 16-May-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Pat Swain**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above.

This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

This QA Inspector observed ABF personnel working at the 9 meter level in an effort to weld the external diaphragm plates to the various shear plates and tower skin plates. This QA Inspector observed the following during the shift noted above.

This QA Inspector observed ABF personnel were in the process of preheating at weld joints #41 and #44. Weld joint #41 at the Southern most shear plate and #44 is Northern most shear plate. At approximately 1000 hours this date this QA Inspector randomly observed QC Inspector Pat Swain verify the preheat temperature was slightly greater than the minimum of 325°F by using an electronic temperature gauge. The induction heating blankets were moved back from the weld joints and welding was started.

This QA Inspector observed ABF welding personnel Jin Quan Huang (#9340) and James Zhen (#6001) using the Flux Cored Arc Welding (FCAW) process at weld joint #41 and ABF welding personnel Xiao Jian Wan (#9677) and Wai Kitlai (#2953) at weld joint #44. This QA Inspector observed ABF welding personnel and working together as a team. It was observed that during breaks and lunch one team member would take over the duty of welding from the other in order to have continuous welding through break periods.

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

This QA Inspector randomly observed as QC Inspector Pat Swain verified the following welding parameters; at weld joint # 41 – 255 amperes and 25.3 volts at travel speed of 444 mm per minute to produce a heat input of 0.87Kj and at weld joint #44 – 265 amperes and 25.3 volts at a travel speed of 400 mm per minute to produce a heat input of 1.00 Kj per mm. The welding parameters appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-3160-1.

Upon the completion of the root pass at weld joints #41 and #44 this QA Inspector observed QC Inspector Pat Swain perform Magnetic Particle Testing (MT) on the root pass. QC Inspector pat Swain informed this QA Inspector he had accepted the MT inspections.

This QA Inspector randomly observed as welding progressed and observed at approximately 1230 hours this date weld joint #41 appeared to have been completed and an induction heat blanket was placed over the welding to start the post heating, 325°F for 3 hours.

This QA Inspector randomly observed as welding progressed and observed at approximately 1300 hours this date weld joint #44 appeared to have been completed and an induction heat blanket was placed over the welding to start the post heating, 325°F for 3 hours.

This QA Inspector was informed by ABF welding Foreman James Zhen that welding would be performed at weld joints #53 and #54 tomorrow. This QA Inspector was informed by QC Inspector Pat Swain that he had performed and accepted the fit up of these joints. This QA Inspector performed a random visual verification of the fit up and observed the work appeared to comply with the contract requirements.

Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above and noted below there were no notable conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Hager,Craig	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
